

44 48. (Amended) The method according to Claim 37 wherein the complexing agent is selected from the group consisting of: citric acid, lignosulfonates, fulvic acid, ulmic acid, humic acid, polyhydroxy organic acid, EDTA, EDDA, EDDHA, HEDTA, CDTA, PTPA or NTA.

45 50. (Amended) The method according to Claim 38 wherein the complexing agent is selected from the group consisting of: citric acid, lignosulfonates, fulvic acid, ulmic acid, humic acid, polyhydroxy organic acid, EDTA, EDDA, EDDHA, HEDTA, CDTA, PTPA or NTA.

#### REMARKS

Claims 29-51 are pending.

Claims 29-51 were examined and rejected.

Claims 42, 44, 46, 48 and 50 have been amended.

In view of the above amendments and the following remarks, the Examiner is respectfully requested to withdraw the rejections and allow Claims 29-51, the only claims pending in this application.

Attached hereto is a marked up version of the changes made to the claims by the current amendment. The attached page is captioned "Version With Markings to Show Changes Made".

No new matter has been added.

#### REJECTION UNDER 35 U.S.C. § 112, SECOND PARAGRAPH

The Examiner has rejected Claims 42, 44, 46, 48 and 50 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the Applicant regards as the invention because of the recitation of Katy-J which the Examiner indicated was a brandname. In response thereto, the Applicant has amended the claims to replace "Katy-J" with the chemical name of Katy-J which is "polyhydroxy organic acid". Support for this amendment may be found at page 8, lines 30-33.

#### REJECTION UNDER 35 U.S.C. §102(b)

The Examiner has reiterated the rejection of Claims 29, 30, 43, 34, 47, 37, 48 and 40 under 35 U.S.C. §102(b) as being anticipated by Roth (4,065,287). The Applicant respectfully submits that the above cited reference does not anticipate Claims 29, 30, 43, 34, 47, 37, 48 and 40.

In Applicant's previous response to this rejection, Applicant submitted that Roth does not anticipate the instant claims as Roth does not disclose all of the elements of the claimed invention, e.g., Roth does not disclose an aqueous solution having a vitamin/cofactor component. The Examiner responded by stating that the "Examiner considers a vitamin or a cofactor or both to be within the ambit of growth regulator as defined by Roth at col. 3 lines 14-16." (Office Action mailed October 11, 2002, page 9).

The Applicant respectfully disagrees with the Examiner's statement that a vitamin and/or a cofactor are considered to be within the ambit of growth regulators. The Examiner makes this statement without providing any reference or other evidence or referring to any art of record that would indicate that either a vitamin is considered a growth regulator or that a cofactor is considered a growth regulator. The Applicant submits that nowhere in Roth is there any mention of a vitamin or a cofactor. In fact, while Roth teaches forty-two specific examples of formulations, some having multiple sub-formulations, none of these specific examples disclose a vitamin or a cofactor. As such, the Applicant respectfully submits that Roth does not anticipate the subject claims for at least the reason that Roth does not disclose a vitamin/cofactor component, where such a vitamin-cofactor component is claimed in the subject claims.

However, even if the Examiner maintains that a vitamin and/or a cofactor are growth regulators, the Applicant respectfully submits that Roth would still not anticipate the claimed invention as growth factors in this context would be considered a genus and vitamin/cofactor would be considered a species. As such, the genus "growth factor" does not anticipate the species "vitamin/cofactor" (see M.P.E.P. Section 2132.02). In fact, the M.P.E.P. speaks to only two situations when a genus anticipates a species, neither of which is applicable to the present situation. More specifically, the first situation of a genus anticipating a species as described in the M.P.E.P. refers to a situation wherein a reference clearly names the claimed species, as well as a number of other species. In this situation, the M.P.E.P. describes that the reference anticipates the claim no matter how many other species are named. However, in the present situation Roth not only does not clearly name a vitamin or a cofactor, but also does not clearly name any other species of growth regulator. Thus, this situation is not analogous to the present situation.

The second situation of a genus anticipating a species as described in the M.P.E.P. refers to a situation wherein a reference discloses a generic chemical formulation. In this situation, the M.P.E.P. describes that the generic chemical formulation will anticipate a claimed species covered by the formula when the species can be “at once envisaged” from the formula. In further describing this situation, the M.P.E.P. describes that “[w]hen the compound is not specifically named, but instead it is necessary to select portions of teachings within a reference and combine them, e.g., select various substituents from a list of alternatives given for placement at specific sites on a generic chemical formula to arrive at a specific composition, anticipation can only be found if the classes of substituents are sufficiently limited or well delineated. *Ex parte A*, 17 USPQ2d 1716 (Bd. Pat. App. & Inter. 1990)”. (emphasis added) In the present situation, Roth explicitly admits that “...plant growth regulator” refers to any of the known chemical compounds which regulates the growth of plants.” (col. 3, lines 14-16). Accordingly, Roth’s admission that “plant growth regulator” is used to describe the vast category of “any known chemical compounds” evidences the lack of sufficient limitation or well delineation of “plant growth regulator” when used in the Roth reference. Thus, this situation is not analogous to the present situation. The M.P.E.P. continues in this regard that “[o]ne of ordinary skill in the art must be able to draw the structural formula or write the name of each of the compounds included in the generic formula before any of the compounds can be “at once envisaged.” One may look to the preferred embodiments to determine which compounds can be anticipated. *In re Petering*, 301 F.2d 676, 133 USPQ 275 (CCPA 1962). As described above, there is no disclosure in Roth, not even in the preferred embodiments described in the multiple examples, that would lead one to a vitamin or cofactor. As such, this situation is not analogous to the present situation.

As such, the Applicant respectfully submits that even if the Examiner maintains that a vitamin and/or cofactor are growth factors, Roth still does not anticipate the subject claims for at least the reason that a genus growth factor does not anticipate a species vitamin/cofactor component.

For at least the reasons described above, the Applicant respectfully requests that this rejection of Claims 29, 30, 43, 34, 47, 37, 48 and 40 under 35 U.S.C. §102(b) as being anticipated by Roth (4,065,287) be withdrawn,

**OBVIOUSNESS UNDER 35 U.S.C. § 103**

The Examiner has maintained the rejection of Claim 31 under 35 U.S.C. §103 over Roth (4,065,287) in view of Van Steenwyk (4,605,560) for the asserted reason that the combination of the references renders the present invention obvious.

The Applicant submits that a *prima facie* case of obvious cannot be sustained over the cited references for reasons analogous to those described above. More specifically, Claim 31 depends from Claim 29 which includes an attractant having a vitamin/cofactor component. As described above, Roth teaches a “growth regulator” however a vitamin/cofactor component is not taught in Roth, even in the forty-two specific examples described in Roth. Furthermore, a vitamin/cofactor is not even suggested in Roth, as neither Roth, nor any art of record teaches or even suggests that a vitamin and/or cofactor are considered growth factors.

Still further, there is no motivation for one of skill in the art to modify the invention of Roth to include a vitamin/cofactor component as neither Roth, nor any other art of record, teaches or suggests adding a vitamin/cofactor component to the Roth compositions of methanol treated activated sludge and agricultural chemical, nor does Roth or any art of record teach that such a vitamin/cofactor is needed. As Van Steenwyk is cited solely for the use of a composition to disrupt ovipositioning of the navel orange worm, Van Steenwyk fails to overcome the deficiencies of Roth. For at least the reasons described above, a proper *prima facie* case of obvious can not be made. Accordingly, the Applicant respectfully requests that this rejection be withdrawn.

Claims 32, 33, 44 and 45 are rejected under 35 U.S.C. §103(a) as being unpatentable over Arny et al. (4,161,084) in view of Roth (4,065,287). Claims 32 recites a method of applying a composition that includes a vitamin/cofactor component to a plant to control frost damage thereof. Claims 33, 44 and 45 depend from Claim 32. The Applicant submits that a *prima facie* case of obvious cannot be sustained over the cited references for reasons analogous to those described above. Arny et al. is cited solely for disclosing a method of applying to the surface of plants non-ice nucleating microorganisms that are antagonistic to ice-nucleating microorganisms. As such, Arny et al. do not teach or suggest a composition that includes a vitamin/cofactor component. As described above, Roth does not teach or suggest such a component. As the cited references either alone or in combination fail to teach or suggest

all of the claimed limitations, a proper *prima facie* case of obvious can not be made. Accordingly, the Applicant respectfully requests that this rejection be withdrawn.

Claim 35, 42, 46 and 48 are rejected under 35 U.S.C. §103(a) as being unpatentable over Roth (4,065,287). Claim 35 depends from Claim 34 which recites a composition that includes a vitamin/cofactor component, Claim 42 depends from Claim 29 which also recites a composition that includes a vitamin/cofactor component, Claim 46 depends from Claim 34 which also recites a composition that includes a vitamin/cofactor component and Claim 48 depends from Claim 37 which also recites a composition that includes a vitamin/cofactor component. For reasons analogous to those described above, i.e., Roth fails to teach or even suggest a composition that includes a vitamin/cofactor component, a proper *prima facie* case of obvious cannot be made. Accordingly, the Applicant respectfully requests that this rejection be withdrawn.

The Examiner has maintained the rejection of Claims 36 and 41 under 35 U.S.C. §103(a) as being unpatentable over Roth (4,065,287) in view of Novitski et al. (5,264,210). The Applicant submits that a *prima facie* case of obvious cannot be sustained over the cited references for reasons analogous to those described above. More specifically, Claim 36 depends from Claim 34 which recites a composition that includes a vitamin/cofactor component. As described above, Roth fails to teach or even suggest a composition that includes a vitamin/cofactor component. Novitski et al. is cited solely for disclosing adding *P. cepacia* to seed to promote growth and does not teach or suggest a composition that includes a vitamin/cofactor component and thus fails to overcome the deficiencies of Roth. Claim 41 depends from Claim 40 which recites a method of treating soil to promote plant growth that includes mixing a composition having a vitamin/cofactor with the soil. As described, the combination of Roth in view of Novitski et al. fails to teach or suggest such a composition. As the cited references either alone or in combination fail to teach or suggest all of the claimed limitations, a proper *prima facie* case of obvious can not be made. Accordingly, the Applicant respectfully requests that this rejection be withdrawn.

Claims 38, 39, 50 and 51 are rejected under 35 U.S.C. §103(a) as being unpatentable over Novitski et al. (5,264,210) in view of Roth (4,065,287). The Applicant submits that a *prima facie* case of obvious cannot be sustained over the cited references for reasons analogous to those described above. More specifically, Claim 38 recites a composition that includes a vitamin/cofactor component. Claims

39, 50 and 51 depend from Claim 38. As described above, the combination of Roth and Novitski et al. fails to teach or suggest a composition that includes a vitamin/cofactor component. As the cited references fail to teach or suggest all of the claimed limitations, a proper *prima facie* case of obviousness can not be made. Accordingly, the Applicant respectfully requests that this rejection be withdrawn.


**CONCLUSION**

In view of the remarks, this application is considered to be in good and proper form for allowance and the Examiner is respectfully requested to pass this application to issue.

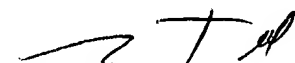
The Commissioner is hereby authorized to charge any fees under 37 C.F.R. §§1.16 and 1.17 which may be required by this paper, or to credit any overpayment, to Deposit Account No. 50-0815, reference no. YAMA001CON9.

Respectfully submitted,  
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**VERSION WITH MARKINGS TO SHOW CHANGES MADE**

**IN THE CLAIMS**

Please amend the claims as follows:

Please amend Claims 42, 44, 46, 48 and 50 as follows:

42. (Amended) The method according to Claim 29 wherein the complexing agent is selected from the group consisting of: citric acid, lignosulfonates, fulvic acid, ulmic acid, humic acid, ~~Katy-J~~ polyhydroxy organic acid, EDTA, EDDA, EDDHA, HEDTA, CDTA, PTPA or NTA.

44. (Amended) The method according to Claim 32 wherein the complexing agent is selected from the group consisting of: citric acid, lignosulfonates, fulvic acid, ulmic acid, humic acid, ~~Katy-J~~ polyhydroxy organic acid, EDTA, EDDA, EDDHA, HEDTA, CDTA, PTPA or NTA.

46. (Amended) The method according to Claim 34 wherein the complexing agent is selected from the group consisting of: citric acid, lignosulfonates, fulvic acid, ulmic acid, humic acid, ~~Katy-J~~ polyhydroxy organic acid, EDTA, EDDA, EDDHA, HEDTA, CDTA, PTPA or NTA.

48. (Amended) The method according to Claim 37 wherein the complexing agent is selected from the group consisting of: citric acid, lignosulfonates, fulvic acid, ulmic acid, humic acid, ~~Katy-J~~ polyhydroxy organic acid, EDTA, EDDA, EDDHA, HEDTA, CDTA, PTPA or NTA.

50. (Amended) The method according to Claim 38 wherein the complexing agent is selected from the group consisting of: citric acid, lignosulfonates, fulvic acid, ulmic acid, humic acid, ~~Katy-J~~ polyhydroxy organic acid, EDTA, EDDA, EDDHA, HEDTA, CDTA, PTPA or NTA.